

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for determining a location of a mobile station, comprising:

receiving a plurality of simulcast signals having substantially identical information from a plurality of base stations;

determining relative time of arrival information for the received plurality of simulcast signals; ~~and~~

determining a position of the mobile station by said mobile station; and
transmitting the mobile station position from the mobile station to one or more of the plurality of base stations.

2. (Previously Presented) The method according to claim 1, further including determining the relative time of arrival information using characteristics inherent in the received signals.

3. (Previously Presented) The method according to claim 2, wherein the inherent characteristics of the received signals include a time dispersion due to simultaneous transmission of the substantially identical simulcast signals.

4. (Original) The method according to claim 3, wherein the received simulcast signals having an OFDM modulation format.

5. (Previously Presented) The method according to claim 4, further including estimating a channel frequency response.

6. (Original) The method according to claim 5, further including transforming the channel frequency response to obtain the relative time of arrival information.

7. (Original) The method according to claim 1, further including receiving base station ID information in the respective simulcast signals.
8. (Original) The method according to claim 1, further receiving GPS signals for determining the relative time of arrival information.
9. (Original) The method according to claim 1, further including utilizing Doppler shift information associated with movement of the mobile station to determine the position of the mobile station.
10. (Original) The method according to claim 1, further including computing a locus of points having a distance from first and second ones of the plurality of base stations that differs by a signal time of arrival difference for signals from the first and second ones of the plurality of base stations.
11. (Original) The method according to claim 10, further including further loci of points for further pairs of base stations.
12. (Original) The method according to claim 1, further including computing the relative time of arrival information using differential in frequency information.
13. (Original) The method according to claim 1, further including receiving a signal from a first one of the plurality of base stations to a second one of the plurality of base stations for identifying the simulcast signals from respective first and/or second ones of the plurality of base stations.
14. (Canceled)

15. (Currently Amended) The method according to claim 14 1, further including transmitting the mobile station position from the one or more plurality of base stations to a network server associated with the one or more plurality of base stations.

16. (Original) The method according to claim 1, further including broadcasting information associated with the mobile station position.

17. (Original) The method according to claim 15, further including broadcasting location-specific advertisements.

18. (Currently Amended) A method for receiving location information for a mobile station at a base station, comprising:

transmitting simulcast signals having substantially identical information to the mobile station; and

receiving, at said base station, mobile station location information from the mobile station determined from relative time of arrival information for the simulcast signals.

19. (Previously Presented) The method according to claim 18, wherein said simulcast signals comprise OFDM signals.

20. (Original) The method according to claim 19, further including transmitting location-specific information to the mobile station.

21. (Currently Amended) A mobile station, comprising:

a receiver for receiving simulcast signals having substantially identical information from a plurality of base stations; ~~and~~

a processor for determining time of arrival information for the received simulcast signals and identifying a location of the mobile station; and

a transmitter for transmitting the mobile station location to one or more of the plurality of base stations.

22. (Original) The mobile station according to claim 21, wherein the simulcast signals are OFDM signals.

23. (Canceled)

24. (Currently Amended) A wireless network for providing location specific information to a mobile station, comprising:

~~a plurality of base stations for transmitting simulcast signals having substantially identical information; and~~

a mobile station for receiving the simulcast signals and determining a location of the mobile station; and

a plurality of base stations for transmitting the simulcast signals having substantially identical information and receiving said location of the mobile station transmitted from the mobile station.

25. (Original) The network according to claim 24, wherein the simulcast signals are OFDM signals.

26. (Original) The network according to claim 24, further including at least one network server for providing location-specific information to the mobile station based upon mobile station location information provided to one or more of the plurality of base stations.

27. (Previously Presented) A wireless network, comprising:

a plurality of base stations for transmitting simulcast signals having substantially identical information to mobile stations and receiving mobile station location information

RESPONSE
SN 09/924,022
PAGE - 6 of 20 -

derived by the mobile stations to broadcast location specific information to the mobile stations.